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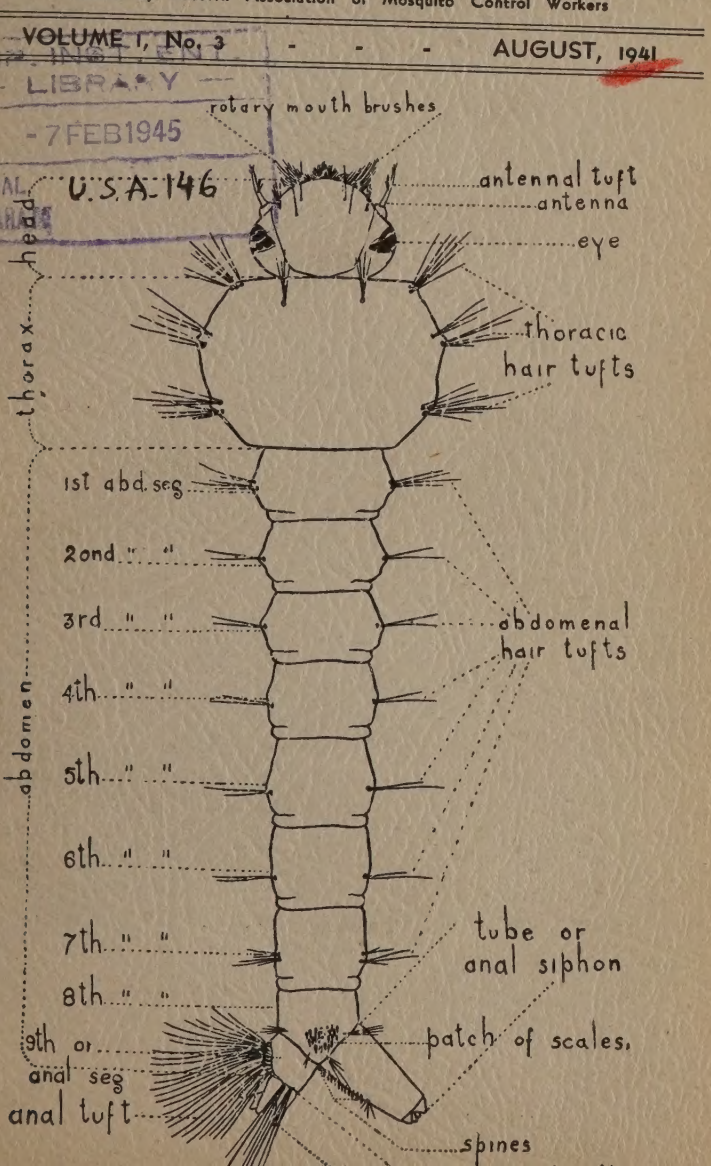

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Eastern Association of Mosquito Control Workers

Vol. 1 August, 1941 No. 3

EDITORIAL COMMENT

Team Work

Team Work is a term applied to coordinated group activity directed at one objective. To secure the advantages of any goal through group action all forces must be directed and correlated. Every individual must share the burden and help when help is needed.

So it is with the publication of an Organization bulletin. Despite the best of objectives, plans or schedules if the individuals fail to play their parts when required the publication cannot be a success.

Team Work required for the publication Of the "Mosquito News" has been conspicuous by its absence. The membership has failed to realize the part they must play to assist the committee in submitting data for publication. When you receive your cue from the committee, get to work, DO YOUR PART.

Business of the Eastern Association
Summary of Minutes of Meetings.

1. A meeting of this Association was held in Atlantic City on March 20, 1941, during the New Jersey convention. Mr. Botsford reported on the Membership Committee's conclusion regarding qualifications of membership. A resolution concerning cooperation of members in the National Defense program was adopted. Discussion occurred on summer trips of one day and a fall trip to inspect work of the Tennessee Valley Authority.

2. A meeting was held in Metuchen on July 29, 1941, following the North Jersey inspection trip. Treasurer's report revealed over 20 members have paid dues. Further discussion on the T.V.A. inspection trip took place and it was tentatively scheduled for late September.

PRESIDENT'S MESSAGE
Defense is My Job

With increasing frequency, of late, the slogan is heard, or is read, that "Defense is Everybodys' Job". There is also an old saying to the effect that "what is everybodys' job may readily become nobodys' job". Why not be more specific? If the effort on the part of the people of this Country is to prove effective in meeting the present emergency, defense must become my job - and yours.

What can we do, now, as mosquito-control workers, to further the program for national defense? In Delaware, we are attempting to answer this question by adjusting, as rapidly as possible, both research and control plans so that the information obtained and the operations carried out will protect the military forces stationed within the State from serious mosquito annoyance.

At the request of army authorities, breeding conditions have already been surveyed, the necessary work has been outlined and cost estimates have been prepared for the fiscal year ending June 30, 1942, for all posts in the Delaware area. This report covers Fort Mott, Finns Point, New Jersey; Fort Delaware, on Pea Patch Island in the Delaware River; Fort duPont, at Delaware City; Fort Saulsbury, to the east of Milford; the extensive development about Cape Henlopen, near Lewes; and the Delaware National Guard Encampment, at Bethany Beach.

A W.P.A. mosquito and malaria-control project in the amount of $62,693 for the area in Delaware within 5 miles of Fort duPont has also been developed and is now awaiting final approval. The certification of this project as necessary adjunct to national defense and as beneficial to the health of troops at this Post is based upon trap records for the past nine years which show that every season approximately ten times as many Anopheles quadrimaculatus are collected here than at all other collection points in the State combined. Detailed specifications have been drawn up and the required permissions secured for work on all units within 1 mile of the Fort. Control operations on the Post itself have been in progress for some time in accordance with plans submitted by those responsible for mosquito-control activities in Delaware. Intensive trapping and breeding studies with special consideration to Mansonia perturbans and the several Anopheline species abundant here are being made.

The ability and the willingness of the responsible local agencies - the Delaware State Highway Department, the Delaware State Board of Health and the Delaware State Agricultural Experiment Station - to supply much-needed information and assistance in the general field of sanitation at the very outset of military expansion in the State has already established a fine relationship between these three organizations and army officials which augurs well for the future.

In Delaware, we are endeavoring to make defense ou
job. Has defense become your job as well?

By Dr. L. A. Stearns.

INSPECTION TRIP BY EASTERN ASSOCIATION OF MOSQUITO CONTROL WORKERS - July 29, 1941.

E. D. Potter

The group left Newark Pennsylvania Railroad Statio and journeyed to Homestead, Hudson County where an inspection was made of an automatic vertical drainage pum also some of Hudson County Mosquito Commission's oiling equipment. Mr. McCarter, Superintendent, and Mr. M. E. Donnelly, Secretary of the Commission, explained the wo ing of the pump. The pump, capable of 3,000 gallons pe minute, lifts the water from a drainage ditch over a da into a tidal stream. Many acres thereby being drained and a large mosquito area thus being kept under contro They also explained the use of their power spray truck which throws a stream of 100 feet from the nozzle of the hose. A motor-cycle catch basin unit was shown. This machine makes it possible for one man to treat as many as 500 catch basins a day in heavy business sections. The hand spraying unit was also illustrated. Mr. Peterson, Superintendent kf Bergen County and Mr. Leslie, Secretary, met the group here.

Next we viewed the dredging operation at Penhorn Creek, Secaucus. Here, because of the effluence from the piggeries, the creek has become filled and this dredging operation was opening up the creek so that th meadow could have the proper drainage. It was pointed out that many areas did not necessitate diking as the dredge materialwas deposited back in the low areas.

We arrived next at Hackensack River west of Secaucus and inspected the reconstruction of a dike by hand labor. Then the group was taken by boat to the mouth of Kingsland Creek, Bergen County, where it had been necessary to sink a scow and fill it with diked material because of the breaking of the old dike. Also seen was the permanent closure which was made after the creek had been shut off.

The group then took time off for lunch at the Wells, Caldwell, New Jersey.

After lunch we arrived at the Passaic River and viewed the progress of the work of the Four-County Committee. This included the operation of a 10" hydraulic dredge, dragline machine and a bulldozer. This work was explained to the group by Mr. Robert Van Note, Superintendent and Mr. James Hart, Assistant Superintendent of the Morris County Mosquito Commission. We were told that the dredge could do as much as 40' a day to grade, the depth being about 4'. The river, at this point of dredging, was approximately 40' in width. We then journeyed to the office of the Morris County Mosquito Extermination Commission which is situated at Morris Plains. Here the larvicide mixing plant was shown and explained to the group.

We arrived at the Union County Mosquito Commission headquarters which is located in Cranford and consists of three buildings; the office building, a large building used for storage and which contains their larvicide mixing plant and equipment, and a long building where cars and trucks and such equipment is kept. Mr. Ralph Van Derwerker, Superintendent and Mr. Scott, Assistant Superintendent, explained the workings of the larvicide mixing plant. Also shown was the new Hardie Power Trailer spraying unit. This unit is mounted on dual wheels and is used for repellent work as well as regular mosquito spraying. It is easily hooked on to any one of the trucks for transporting from one area to

another. Also seen was the motorcycle catch basin spraying unit which was much like the Hudson County machine.

We next visited Farrington Lake, North Brunswick Township, Middlesex County. Here we inspected a portable larvicide spraying unit which was explained by Mr. Thom, Engineer. A further description of this unit can be found in a paper by Mr. Thom in this publication.

A meeting of the Eastern Association of Mosquito Control Workers was then held in the new building of the Middlesex County Mosquito Extermination Commission located in Metuchen.

The meeting was opened by the President, Dr. Stearns of Delaware. The minutes of the meeting will record the discussion which took place.

The following districts were represented on the inspection trip and at the meeting: Delaware, New Jersey, New York and Connecticut.

ACTIVITIES OF MEMBER STATES

Mosquito Work in Rhode Island

A report comes from Milton H. Price, Supervisor, that many difficulties in securing projects confront them in Rhode Island. If, and when, the Quonset Naval Air Base project is started he invites the Eastern Association for a one-day trip to make an inspection of same.

Suffolk County

By C. T. Williamson.

Suffolk County Mosquito Extermination Commission has just received approval of a W.P.A. project amounting

to $60,000 for mosquito control work within the reservation of Camp Upton, Yaphank, Long Island, New York.

We have a second W.P.A. project pending in Washington at the present time for $125,000 for work on swamp areas adjacent to the reservation at Camp Upton. At the present time, we have every prospect of an early approval of this project.

Suffolk County Mosquito Extermination Commission has been granted a license by the Endowment Foundation, State of New Jersey, for the manufacture and use by us of pyrethrum larvicide under the Ginsburg Formula. So far, very satisfactory results have been obtained from our new plant in handling this material.

Delaware

A total of $33,250 for each year of the coming biennium was appropriated by the Delaware State Legislature at its recent session for the maintenance of mosquito-control structures installed in Sussex and Kent Counties by the C.C.C. between October, 1933 and November, 1938.

MOSQUITO CONTROL AND NATIONAL DEFENSE

Southern States

By Sen. Surg.
L. L. Williams, Jr.
U.S.P.H.S. Liaison Officer,
Fourth Corps Area.

A large number of troops, including infantry, tank corps, and aviators, are in training in the Southern States in portions of which malaria is prevalent. It is obvious that soldiers infected with malaria are not efficient on the drill field, nor do they make good combat units. Trainees on night maneuvers or in bivouac camps would be handicapped by the intense

annoyance of bites from numerous pestiferous mosquitoes, even though they might not be in danger of contracting a disease. Therefore, anti-mosquito work has been initiated within and without the permanent camps, and certain precautions are contemplated during Army maneuvers.

The Medical Corps of the Army has organized ditching and oiling gangs to prevent mosquito emergence from breeding areas within a mile of the camp site inside all military reservations, and thus will control production of Anopheles quadrimaculatus our malaria vector, as well as the more pestiferous species of Aedes, Psorophora and Mansonia. This area is enlarged wherever mosquitoes of long flight range are found breeding within the reservation, especially the fiercely biting salt marsh Aedes. As labor shortage necessarily slows the ditching program, larvicide crews have been organized. They secure temporary control and will continue in full force until ditching operations permit their reduction to a minimum. Fuel oil No. 2 has been selected as the larvicide of choice.

Mosquito breeding in the environs of the military reservations and of the nearby towns, habitually frequented by large numbers of troops, is of equal importance to that within the reservations. Here control operations are a responsibility of local and state health authorities and of the U. S. Public Health Service. Aided by the liaison officers of the Public Health Service to the Corps Areas, the state health departments commenced (during the autumn of 1940) to survey the malaria and mosquito prevalence in the extra-cantonment areas. Subsequently a number of W.P.A. mosquito control drainage project applications were prepared and were certified as National Defense Projects by the Army Corps Area surgeons and the Public Health Service liaison officers. A number of these have been approved, and are now in progress.

Pending completion of drainage works, some of which ill take two or more years, larvicides must be used in ll areas. Largely financed by appropriations to the . S. Public Health Service for Emergency Health and anitation Activities and working through the state ealth departments, a larvicide campaign was inaugurated n May. Trucks, spray cans, tools, and fuel oil No. 2 ere secured and labor employed. Each larvicide crew is omposed of a foreman-driver and four oilers. A truck s assigned to a crew. It transports the men and cans nd one or more drums of oil. Arrangements have been ade with the oil companies to make daily delivery at illing or bulk storage stations of drums to each truck s needed.

The Army and Navy extra-cantonment areas were rapidy surveyed and the necessary number of oiling crews deermined. The minimum radius of each control area was ne mile, being the flight range of Anopheles quadriaculatus, the malaria vector of the South. Some areas ave a larger radius where pestiferous mosquito species bound. The extension is determined by the flight range f the locally prevalent species. Where camps are on r near the coast, this radius is five to seven miles f salt marsh species are breeding abundantly. In these ases no attempt is made to oil all of the salt marsh reeding areas, a very large and uneconomical task, ut only the nearer areas which permit unusually heavy roduction. Control in the whole area must await ditching to let the daily tides into the high salt meadows. The W.P.A. has recently authorized larvicide application in and near military and naval stations, and it is expected this activity will commence at an early date.

During summer maneuvers no effort will be made to control mosquito production in the various encampment areas as these will be used for very brief periods and their exact location cannot be pre-determined. The Army will place reliance on the use of tent nets and

head nets (for sentries at night) and the use of prophylactic medication. The Public Health Service is now engaged in adopting the New Jersey pyrethrum larvicide to use in hand spray pumps and in testing other insecticides and repellents for possible use in protecting groups at fixed stations briefly occupied at night, such as anti-aircraft gun crews, and bivouac encampments. This protection is of course against adult mosquitoes.

It is believed that all of these measures will greatly reduce the annoyance from mosquitoes and will hold the malaria rates to a low figure among the trainees.

Camp Raritan
New Jersey

By E. D. Potter

At Camp Raritan a project of large size has been in operation since the first part of June. This calls for 90 laborers and 10 inspectors and oilers. Because of the shortage of labor we have been operating with only 30 laborers and at the present writing only 12½% of the area has been reconditioned. To prevent emergence of mosquitoes we are spraying with New Jersey larvicide both by hand and by power sprayer supplied by the W.P.A. This unit is mounted on a small flat car with a 250 gallon tank in which the emulsion is mixed with water taken from the ditches. Two hoses are run from this pump each one being 150' in length so both sides of the track may be treated at the same time. The entire unit is pulled by a small engine supplied by the U. S. Army and is doing very efficient work.

DEVELOPMENTS IN MOSQUITO CONTROL
Middlesex County Spray Unit

By Wm. Thom

For sometime past, the Middlesex County Mosquito

termination Commission has been concerned with the
avy infestation of mosquitoes in the vicinity of
rrington Lake and this year, after consultation with
nicipal authorities and owners of industries in the
mmunities adjacent to the lake who offered financial
pport, made a survey of the lake area to determine the
st means of relieving the situation.

Farrington Lake, which lies between East and North
unswick Townships, is a narrow body of water about ten
les long. It is an artificial lake confined by mason-
dams to five levels in the deep gulley formed by
wrence Brook. It receives its water from the flat
ampy areas of South Brunswick and serves as a water
pply for the city of New Brunswick.

Some parts of the lake are quite shallow and there
e a number of coves too shallow to float a boat. In
her parts the shores of the lake are very steep and
ergrown with brush.

As breeding was found pretty generally along the
ore of the lake it was decided to spray the surface
the lake along the shore line periodically with New
rsey larvicide for a width of 30'. The problem was
find equipment flexible enough to be used either in
small boat or in a truck and light enough to be read-
y transported by hand.

The pump selected was furnished by the Trench and
rine pump Company, Inc., of 126 West 22nd Street, New
rk City, and is known as their Trench-Marine #357-E
rtable pressure pumper, two stage design, self prim-
g with 1½" suction and discharge, bronze fitted,
llbearing equipped with single cylinder air cooled
iggs and Stratton Gasoline engine developing 1.8 H.P.
rect connected through flexible coupling, mounted on
eel base with tubular carrying handles. It weighs
out 175 pounds which makes it easy for two men to
rry. It has a capacity of 30 gallons per minute when

discharging through two ten foot lengths of 1" hose fitted with ¼" nozzles and under a working pressure of 25 pounds will throw a solid stream about thirty feet.

In addition to the 1¼" suction pipe there is a ¼" connection into the suction chamber valve controlled, through which the larvicide concentrate is drawn and thoroughly mixed with lake water in its passage through the pump chamber.

In operating on the large open areas of the lake, the pump is mounted on a 24" flat bottomed scow propelled by an outboard motor. Water is pumped directly from the lake and larvicide drawn from a 55 gallon drum.

At other levels of the lake a 14' rowboat is used and larvicide is then drawn from a 5 gallon can. On other parts of the lake, the pump is mounted on a light pick-up truck in which case, the larvicide is mixed and drawn from a 55 gallon drum and pumped through about 150 feet of garden hose to the shore line.

This equipment has been found very satisfactory and is similar to that used by the T.V.A. though we have been given to understand that it is a more recent design and shows a better performance.

Union County Spray Unit

By R. Vanderwerker

The Union County Mosquito Commission has acquired a Hardie trailer spray unit for larvicide spraying. This unit is attached beyond any of several trucks and hauled to the various jobs. A dual wheel rubber-tired chassis, carrying gasoline engine, 3 cylinder pump, 250 gallon tank with agitator, makes this a complete and effective unit. It pumps 15 gallons per minute at 400

unds pressure. When not in use, this leaves all ucks free for carrying men or materials without hav- g to dismantle tank and pump from the truck body.

DREDGE OF FOUR-COUNTY COMMITTEE

By R. Vannote

The Four County dredge in the Upper Passaic Valley, ich was visited on July 22nd by the Eastern Associa- on of Mosquito Control Workers, has just completed s thirteenth month of operation. The dredge, which as designed by Robert L. Vannote, Secretary of the our County Committee, has proven to be the most essen- al piece of equipment for the particular job.

The barge on which the dredge equipment is mounted as built in three sections because of the need for tting equipment through the bridges. (Twice during he last three months it was dismantled to pass under wo highway bridges). The pump is a 10" Ellicott ydraulic pump, driven by a 150 H.P. Speedway engine. here are two auxiliary 32 H.P. LeRoi engines - one owers a five-drum hoist which operates the shore lines, utter depth and two spuds, and the other engine rotat- s the cutter on the end of the cutter ladder. The utter ladder is 20' long and capable of excavating to depth of 12'. On each swing of the dredge a 12" cut s made, approximately 24" wide.

During the thirteen-month period from late June, 940 to the end of July, 1941, 10,700 linear feet of ver channel has been cleaned, excavating 103,419 ubic yards of material. One must realize, of course, hat during this time the machine was not operating ontinually because of such hazards as ice, sub-zero eather, moving, dismantling for bridges, and minor reakdowns. Under normal conditions the dredge is apable of excavating 600 cubic yards of material in n 8-hour day.

At the present time the Passaic River Channel is being dug to a bottom width of 90' and a top width of 110', with an average cut of 38'.

In the short time this dredge has worked a marked improvement has been noticed in the run-off from meadows in the Upper Passaic Valley. With evidence of improvement in this short time it seems reasonable that, as the work continues, the benefits will increase proportionately.

The Morris County Mosquito Extermination Commission, in New Jersey, is conducting experiments with large traps in an endeavor to develop one that can be used as a control measure.

The experimental trap now in use was designed after the N. J. State Mosquito Gauge, only 2-2/3 times larger, and has a 20' fan. The light attraction is under a study at present and preliminary work has shown a 200 watt bulb to have a greater attraction than anything smaller. Baiting was attempted on several occasions with the use of CO2 and it was found that catches were doubled over the nights not baited.

We plan to build another large trap and further continue studies with lights and CO2 until cold weather prohibits practical experiments.

Southern Mosquitoes in Maryland

By W. A. Connell

The writer has had several opportunities in recent years to collect insects in the Pocomoke Swamp. This cypress swamp, which according to Beavan and Oosting (1939) is the most northerly of its type in the United States, is located on the Eastern Shore of Maryland along the Pocomoke River in Worcester and Wicomico Counties.

Adult mosquitoes were rather numerous in the swamp ng some of these visits, and among those collected representatives of three species apparently new to State. These are blood-sucking forms, but probably of no appreciable pest importance here, since they rently are present only in small numbers. The cipal importance of the collections is that they ex- considerably the known distribution range of these ies. Two, Psorophora howardii and Psorophora varipes heretofore been known to occur as far north as gia and Arkansas and there are records of the third, s infirmatus, from North Carolina (King et al, 1939).

All individuals were taken while attempting to bite. collection data are as follows:

Psorophora varipes (Coq.), 8 females, Timmonstown ch, northwest of Libertytown, Worcester Co., October 1936.

Psorophora howardii (Coq.) 1 female, Timmonstown ch, north of Libertytown, Worcester County, Septem- 2, 1939.

Aedes infirmatus (D. and K.), 2 females, Purnell ssing, northwest of Libertytown, Worcester County, tember 23, 1939, and 1 female, Timmonstown Branch, th of Libertytown, Worcester County, October 7, 1939.

Dyer (1928) listed twenty-eight species of the family Culicinae as occuring in Maryland and Cory al (1934) recorded nine more. These together with records published here made a total of forty cies of mosquitoes which are now known from this te.

The writer is indebted to G. H. Bradley for the ermination of Psorophora varipes and to Alan Stone verifying the determination of the other species.

Literature cited

Beavan, G. G. and H. J. Oosting, 1939. Pocomoke Swamp: a study of a cypress swamp on the Eastern Shore of Maryland. Bull. Torrey Bot. Club 66: 367-389.

Cory, E. N., G. S. Langford, S. L. Crosthwait and C. Graham, 1934. Anti-mosquito work in Maryland. Univ. Md. Ext. Ser. Bull. 73:1-31.

Dyar, H. G., 1928. The mosquitoes of the Americas. Carnegie Inst. Wash. Publ. 387, 616 pp., 123 pl.

King, W. V., G. H. Bradley and T. E. McNeel, 1939. The mosquitoes of the Southeastern States. U.S.D.A. Misc. Publ. 336:1-91.

REVIEW OF BOOKS AND PUBLISHED ARTICLES

A complete publication of papers presented at a section of the Annual Meeting of the American Association for the Advancement of Science on the subject of Human Malaria is to be published on August 16. Forty-two contributing papers by the most outstanding men in the work on Parasitology, Anopheline Vectors, Epidemiology, Pathology, Immunity, Treatment, Control and Eradication, with 1,057 references make up this valuable book. Cost will be $5.00 and it may be obtained by writing Mr. F. R. Moulton, Permanent Secretary, American Association for the Advancement of Science, Smithsonian Institution Building, Washington, D. C.

New Jersey work has received excellent publicity this summer by long articles in the magazine sections of the New York Herald Tribune on June 29, 1941 and the New York Times on July 20, 1941. Life Magazine,

ssue of August 11, 1941, published an article on mosqui-
oes and control, with pictures obtained in New Jersey
aboratories and field.

There may be other books or articles of value to
embers which your committee has not seen. Kindly call
ur attention to same.

PERSONAL NOTES

Mr. Louis Edgell, a graduate of the School of
ngineering of the University of Delaware, 1934, and
ormerly associated with the Delaware Mosquito Control
ommission while C.C.C. work was in progress in the
tate, has been employed by the Delaware State Highway
epartment to work with the Department of Entomology
f the Delaware State Agricultural Experiment Station
n connection with a W.P.A. mosquito and malaria-control
roject about Fort duPont, Delaware. He will be respon-
ible for providing detailed specifications and for
ecuring the necessary permissions for all operations
n that area.

Mr. Carl B. Huffaker, with a record of service in
arious capacities by the Tennessee Valley Authority
rom December, 1933, to September, 1939, has been em-
loyed jointly by the Delaware State Highway Department
nd the Delaware State Agricultural Experiment Station
o handle trapping studies throughout the State and to
nvestigate Anopheline and Mansonia perturbans breeding
n the Fort duPont area. The control procedure at that
oint, as outlined by Mr. Edgell, will be based on the
nformation obtained by Mr. Huffaker.

Robert L. Vannote, Superintendent of the Morris
ounty Mosquito Commission, is now employed as Assistant
o the President of the Newark College of Engineering.

MEETINGS AND CONVENTIONS

Mr. A. C. Newman, Secretary-Treasurer of the Florida Anti-Mosquito Association reports that the minutes of their Annual Meeting held in Jacksonville will be printed in the near future.

The 1941 National Meeting of the American Public Health Association will be held in Atlantic City, N.J., on October 14-17, 1941. Papers and exhibits on mosquito control and malaria will be part of the program.

Printed copies of the 28th Annual Meeting of the New Jersey Mosquito Extermination Association have been issued. This meeting occurred in 1941 at Atlantic City and latest developments are discussed in these proceedings.

The Association's inspection trip to the Tennessee Valley is now tentatively set for late September. It will likely take about 10 days and among the activities to be seen will be aerial dusting, cutting of water vegetation, boat spraying of shore lines, malaria screening, the great T.V.A. reservoirs and the Memphis laboratories of the U. S. Public Health Service. It seems like an interesting, educational and worth-while inspection trip.